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ABSTRACT

The Santa Ana College (SAC) Research Office cataloging system based on ERIC subject descriptors and on an internally developed document source and author index is described. Each document entering the office is assigned a classification number which includes a subject index code, a source index code, the publication date, and a unique sequence number from which computerized document listings by subject index number, source, and alphabetic titles are generated. SAC's subject classification derives from the Descriptor Group Display in "The Thesaurus of ERIC Descriptors". The system advantages include ease of locating items within the system and of conducting searches, the ability to generate periodic current document listings to keep the administration and staff up-dated, and improvement of the Institutional Research Office image and reputation due to the retrieval efficiency of the taxonomic classification. System disadvantages are identified: subjectivity in subject index coding and a problem with no margin for coding errors. Future system plans involve developing an on-line file maintenance and search operation to facilitate document processing and eliminate some processing errors. (TR)

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A TAXONOMIC CLASSIFICATION OF RESEARCH DOCUMENTS OR HOW ERIC SAVED THE INSTITUTIONAL RESEARCH LIBRARY

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SANTA ANA COLLEGE
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JC 780 205

A Taxonomic Classification of Research Documents or How ERIC Saved the Institutional Research Library

Robert Daly
Institutional Research Office
Santa Ana College
April 1978

" . . . another useful function of an institutional research office is to maintain a 'research library'."*

I. Introduction

Ben is correct. A useful function of an institutional research office is maintaining a research library. However, a research library is useless unless properly maintained. All researchers know that building the research library is a simple task. One simply collects all type, color, and shape of documents, books, magazines, articles, reports, memos, letters, and board dockets that you can get your hands on and put them on your bookshelves and in your file cabinets. But maintaining this library is not so easy. The tough questions like how should it be arranged, how do I remember what is on the shelves, how long should the documents be kept, what documents do I have about attrition, etc., have to be answered.

At the Research Office at Santa Ana College (SAC), these questions have been answered. The staff of the Research Office has created a document cataloging system based on ERIC subject descriptors and on an internally developed document source and author index. The ERIC taxonomy was chosen since the ERIC system is primarily concerned with education topics and is a proven system of subject indexing.

Each document that enters the Research Office is assigned a document code number. This number includes a subject index code, a source index code, the publication date, and a unique sequence number. This classification system results in a "Document Listing By Subject Index Number", a "Document Listing By Document Source", and a "Document Listing By Alphabetic Title" and provides for easy access to the document by any one of these indexes.

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* Ben Gold, Change Magazine, Community College Supplement, May 1973, p. 32a.

II. Taxonomic Classification

A. The Subject Index

SAC's subject index is derived directly from the ERIC system. A list of ERIC subject groups can be found in The Thesaurus of ERIC Descriptors. The subject classification system at SAC is based on the descriptor group display in the Thesaurus. A copy of this display is presented in Exhibit 1. The ERIC descriptor group names are assigned code numbers.[1] These numbers provide the broad subject index numbers. The ERIC descriptors following the group names have also been numbered and are used as the narrow subject index number. The combination of these two code numbers is the subject index number.

These index numbers are of great value in locating documents dealing with a particular topic in the research library. The research staff, faculty, and administrators have found the subject index a valuable tool for locating documents for research and decision-making.

The Research Office also provides a listing of utilized subject titles (Exhibit 2). As documents are entered into the library, a listing of their subjects is maintained. The listing utilizes the format of the ERIC Descriptor Group Display and is, in fact, a subset of that listing. By referring to this listing, it can be determined if the research library contains a document on a particular subject. The precise material may then be referenced in the Document Listing By Subject Index Number (Exhibit 3).

B. The Source Index

The document source or author index has two functions in the library. First, it provides a method to locate documents prepared by a particular person, agency, or office. For example, this index can provide the college president with a complete, up-to-date, chronological listing of reports and

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[1]This page was taken from an old Thesaurus. The latest (1975 edition) Thesaurus does not have these numbers.

Exhibit 1

DESCRIPTOR GROUP DISPLAY

Broad subject index number/ ERIC descriptor group name

Narrow subject index number/ ERIC descriptor

010 Abilities
005 ABILITY
010 ABILITY IDENTIFICATION
015 ACADEMIC ABILITY
020 ACADEMIC ACHIEVEMENT
025 ACADEMIC APTITUDE
030 ACADEMIC FAILURE
035 ACHIEVEMENT
040 AGRICULTURAL SKILLS
045 ALPHABETIZING SKILLS
050 APTITUDE
055 AUDIOLINGUAL SKILLS
060 BASIC SKILLS
065 BUSINESS SKILLS
070 COGNITIVE ABILITY
075 COMMUNICATION SKILLS
080 COMPOSITION SKILLS (LITERARY)
085 COMPREHENSION
090 CREATIVE ABILITY
095 DAILY LIVING SKILLS
100 DECISION MAKING SKILLS
105 EYE VOICE SPAN
110 HANDWRITING SKILLS
115 HOME ECONOMICS SKILLS
120 HOMEMAKING SKILLS
125 INDIVIDUAL POWER
130 INTELLIGENCE
135 INTELLIGENCE DIFFERENCES
140 INTELLIGENCE LEVEL
145 INTELLIGENCE QUOTIENT
150 INTERPERSONAL COMPETENCE
155 INTERPRETIVE SKILLS
160 JOB SKILLS
165 KNOWLEDGE LEVEL
170 LANGUAGE SKILLS
175 LEADERSHIP QUALITIES
180 LIBRARY SKILLS
185 LISTENING SKILLS
190 LOCATIONAL SKILLS (SOCIAL STUDIES)
195 LOW ACHIEVEMENT FACTORS
200 MAP SKILLS
205 MARKSMANSHIP
210 MECHANICAL SKILLS
215 NEGRO ACHIEVEMENT
220 NONVERBAL ABILITY
225 OBJECT MANIPULATION
230 OCCUPATIONAL ASPIRATION
235 PERFORMANCE
240 PRODUCTIVITY
245 PSYCHOMOTOR SKILLS
250 READINESS
255 READING SKILLS
260 RECOGNITION
265 RESEARCH SKILLS
270 SCIENTIFIC LITERACY
275 SELF CARE SKILLS
280 SERIAL ORDERING
285 SKILL OBSOLESCENCE
290 SKILLS
295 SORTING PROCEDURES
300 SPEECH SKILLS
305 SPELLING
310 STUDENT ABILITY
315 STUDY SKILLS
320 TALENT
325 TASK PERFORMANCE
330 TEACHING SKILLS
335 VERBAL ABILITY
340 VISUAL ACUITY
345 VISUAL LITERACY
350 VOCABULARY SKILLS
355 VOCATIONAL APTITUDE
360 WORD RECOGNITION
365 WORD STUDY SKILLS
370 WRITING SKILLS

020 Administration
002 ACADEMIC RECORDS
004 ACCOUNTABILITY
006 ADMINISTRATION
008 ADMINISTRATIVE CHANGE
010 ADMINISTRATIVE ORGANIZATION
012 ADMINISTRATIVE POLICY
014 ADMINISTRATIVE PRINCIPLES
016 ADMINISTRATIVE PROBLEMS
018 ADMINISTRATOR CHARACTERISTICS
020 ADMINISTRATOR GUIDES
022 ADMINISTRATOR ROLE
024 ADMINISTRATOR SELECTION
026 ADMISSION (SCHOOL)
028 ADOPTION (IDEAS)
030 ANCILLARY SERVICES
032 ANNUAL REPORTS
034 ASSISTANT SUPERINTENDENT ROLE
036 ATTENDANCE
038 ATTENDANCE RECORDS
040 ATTENDANCE SERVICES
042 AVERAGE DAILY ATTENDANCE
044 AVERAGE DAILY ENROLLMENT
046 BOARD ADMINISTRATOR RELATIONSHIP
048 BOARD OF EDUCATION POLICY
050 BOARD OF EDUCATION ROLE
052 BOARDS OF EDUCATION
054 BUS TRANSPORTATION
056 CASE RECORDS
058 CENTRALIZATION
060 CLASS ATTENDANCE
062 COLLEGE ADMINISTRATION
064 COLLEGE ADMISSION
066 COLLEGE ATTENDANCE
068 COLLEGE COOPERATION
070 COLLEGE PLANNING
072 COLLEGE SCHOOL COOPERATION
074 COMMUNITY CONTROL
076 COMPETITIVE SELECTION
078 CONFIDENTIAL RECORDS
080 CONSORTIA
082 CONSTRUCTION MANAGEMENT
084 COOPERATIVE PLANNING
086 COORDINATION
088 CRITICAL PATH METHOD
090 CURRICULUM PLANNING
092 DECENTRALIZATION
094 DELIVERY SYSTEMS
096 DEPARTMENTAL TEACHING PLANS
098 DEPARTMENTS
100 DESIGN BUILD APPROACH
102 DISCIPLINE POLICY
104 DOUBLE SESSIONS
106 DRESS CODES
108 DUAL ENROLLMENT
110 EARLY ADMISSION
112 EDUCATIONAL ACCOUNTABILITY
114 EDUCATIONAL ADMINISTRATION
116 EDUCATIONAL COORDINATION
118 EDUCATIONAL PLANNING
120 EDUCATIONAL POLICY
122 EMERGENCY PROGRAMS
124 ENROLLMENT
126 ENROLLMENT PROJECTIONS
128 ENROLLMENT RATE
130 ENROLLMENT TRENDS
132 EXPULSION
134 EXTENDED SCHOOL DAY
136 EXTENDED SCHOOL YEAR
138 FACULTY PROMOTION
140 FARM ACCOUNTS
142 FARM MANAGEMENT
144 FAST TRACK SCHEDULING
146 FIXED SEQUENCE
148 FLEXIBLE SCHEDULES
150 FLEXIBLE SCHEDULING
152 FREE CHOICE TRANSFER PROGRAMS
154 GOVERNANCE
156 GOVERNING BOARDS
158 GUIDELINES
160 HIGH SCHOOL ORGANIZATION
162 HORIZONTAL ORGANIZATION
164 INCENTIVE SYSTEMS
166 INFORMAL ORGANIZATION
168 INSERVICE PROGRAMS
170 INSTITUTIONAL ADMINISTRATION
172 INTERAGENCY COOPERATION
174 INTERAGENCY COORDINATION
176 INTERAGENCY PLANNING
178 INTERDISTRICT POLICIES
180 INTERINSTITUTIONAL COOPERATION
182 INTERMEDIATE ADMINISTRATIVE UNITS
184 LAND ACQUISITION
186 LATE SCHOOL ENTRANCE
188 LEADERS GUIDES
190 LEADERSHIP RESPONSIBILITY
192 LEGAL RESPONSIBILITY
194 LIBRARY COOPERATION
196 LIBRARY PLANNING
198 MAINTENANCE
200 MANAGEMENT
202 MANAGEMENT BY OBJECTIVES
204 MANAGEMENT SYSTEMS
206 MASTER PLANS
208 MERGERS
210 MIGRANT TRANSPORTATION

SUBJECT DESCRIPTORS GROUP DISPLAY

010 ABILITIES
- 020 ACADEMIC ACHIEVEMENT
- 235 PERFORMANCE
- 310 STUDENT ABILITY
- 355 VOCATIONAL APTITUDE

020 ADMINISTRATION
- 010 ADMINISTRATIVE ORGANIZATION
- 012 ADMINISTRATIVE POLICY
- 018 ADMINISTRATOR CHARACTERISTICS
- 022 ADMINISTRATOR ROLE
- 032 ANNUAL REPORTS
- 042 AVERAGE DAILY ATTENDANCE
- 078 CONFIDENTIAL RECORDS
- 090 CURRICULUM PLANNING
- 098 DEPARTMENTS
- 122 EMERGENCY PROGRAMS
- 124 ENROLLMENT
- 124 ENROLLMENT
- 126 ENROLLMENT PROJECTIONS
- 130 ENROLLMENT TRENDS
- 156 GOVERNING BOARDS
- 178 INTERDISTRICT POLICIES
- 192 LEGAL RESPONSIBILITY
- 200 MANAGEMENT
- 202 MANAGEMENT BY OBJECTIVES
- 204 MANAGEMENT SYSTEMS
- 206 MASTER PLANS
- 208 MERGERS
- 212 MULTICAMPUS DISTRICTS
- 216 NONINSTRUCTIONAL RESPONSIBILITY
- 218 OBJECTIVES
- 220 OFFICE MANAGEMENT
- 222 ORGANIZATION
- 232 PAYROLL RECORDS
- 238 PLANNING
- 248 PROBATIONARY PERIOD
- 258 PROGRAM DESCRIPTIONS
- 276 PUBLIC RELATIONS
- 278 PURCHASING
- 286 RECORDKEEPING
- 288 RECORDS (FORMS)
- 296 RESOURCE ALLOCATIONS
- 308 SCHEDULING
- 312 SCHOOL CALENDARS
- 334 SCHOOL REGISTRATION
- 352 SPECIAL SERVICES
- 354 STAFF IMPROVEMENT
- 364 STATEWIDE PLANNING
- 370 STUDENT RECORDS
- 416 TRANSFER POLICY

040 ATTITUDES
- 015 ADMINISTRATOR RESPONSIBILITY
- 160 EMPLOYEE ATTITUDES
- 225 MORAL VALUES
- 420 TEACHER ATTITUDES

050 AUDIOVISUAL MATERIALS AND METHODS
- 120 EDUCATIONAL TV
- 535 VIDEO TAPE RECORDINGS

080 COMMUNICATION
- 100 CONFERENCE REPORTS
- 320 NEWSLETTERS
- 385 SCHOOL NEWSPAPERS

090 COUNSELING
- 015 CAREER PLANNING
- 075 COUNSELING PROGRAMS
- 080 COUNSELING SERVICES
- 170 GUIDANCE
- 195 GUIDANCE SERVICES
- 270 STUDENT PERSONNEL SERVICES

110 CURRICULUM
- 015 AFRICAN AMERICAN STUDIES
- 015 AFRICAN AMERICAN STUDIES
- 105 COURSES
- 265 LANGUAGE PROGRAMS

120 DEMOGRAGHY
- 010 CENSUS FIGURES
- 035 DEMOGRAPHY
- 055 DROPOUT RATE
- 065 ETHNIC DISTRIBUTION
- 095 GEOGRAPHIC REGIONS
- 155 POPULATION TRENDS
- 165 RESIDENTIAL PATTERNS
- 190 SCHOOL DEMOGRAPHY

130 DEVELOPMENT
- 025 CHILD DEVELOPMENT
- 045 COMMUNITY DEVELOPMENT
- 225 SITE DEVELOPMENT

140 EDUCATION
- 025 ADULT EDUCATION
- 030 ADULT EDUCATION PROGRAMS
- 085 ASSOCIATE DEGREES
- 185 DEGREES (TITLES)
- 240 EDUCATIONAL BENEFITS
- 270 EDUCATIONAL NEEDS
- 275 EDUCATIONAL OBJECTIVES
- 300 EDUCATIONAL PROGRAMS
- 370 EXTENSION EDUCATION
- 430 HEALTH OCCUPATIONS EDUCATION
- 460 INSERVICE TEACHER EDUCATION
- 495 LIBRARY EDUCATION
- 603 PHYSICAL EDUCATION
- 645 PROFESSIONAL CONTINUING EDUCATION

Exhibit 3

5/16/77
18:57

SANTA ANA COLLEGE
CATALOG OF DOCUMENTS

RSCCD
ER0024

DOCUMENT LISTING BY
SUBJECT INDEX NUMBER

SUBJECT NUMBER (A) (B)

220.350 FINANCE : SALARIES

FILE NUMBER	DESCRIPTION
1,018 (C) 00149 (D) 11/74 (E)	SUMMARY OF SALARIES PAID IN HIGHER EDUCATION, 1973-1974, IN NDA RESEARCH MEMO
1,030 (C) 00263 (D) 3/77 (E)	UPDATE ON FACULTY SALARY AND FRINGE BENEFIT COMPARISONS, FALL 1976-77, FOR CALIFORNIA COMMUNITY COLLEGES

A - BROAD SUBJECT INDEX NUMBER/ERIC DESCRIPTOR GROUP NAME

B - NARROW SUBJECT INDEX NUMBER/ERIC DESCRIPTOR

C - SOURCE NUMBER

D - UNIQUE SEQUENCE NUMBER

E - PUBLICATION DATE

other work completed by the Institutional Research Office. Second, the source index, in conjunction with a unique document number, provides a logical method for placement of documents on the bookshelves and in the file cabinets. The documents are ordered first by the source number and, within this number, by the unique document number.

The source index number consists of two parts, a major and minor source. Take, for example, the source number 5.741. The "5" represents schools and institutions and, more specifically, the "741" represents the Institutional Research Office at Santa Ana College.

A sample "Document Listing by Document Source" is shown in Exhibit 4.

C. Alphabetic Listing by Title of Document

An alphabetic listing of documents by title is also provided (Exhibit 5). Thus, documents may be located by subject, source, or alphabetically by title.

III. Advantages of the System.

Any time a system or procedure is planned and initiated there are advantages and disadvantages to the new system. Hopefully, new systems are developed only when the advantages outweigh the disadvantages. During the planning phase of the Taxonomic Classification System, it was decided that the advantages far outweighed the disadvantages. This statement is even more valid now that the system has been in operation for one year.

One of the most important advantages to the classification system is the ease of finding documents in the research library. The source index provides a logical order for placing the documents on the shelves. This avoids subjective placement of documents in the files and demands a standardized system for filing.

The subject index (with the aid of the subject index listing) allows a researcher to locate all documents in the library on a specific topic. The advantages that this provides are many. For example, the subject index

Exhibit 4

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SANTA ANA COLLEGE
CATALOG OF DOCUMENTS

RSCCD
ER0024

DOCUMENT LISTING BY
DOCUMENT SOURCE

SOURCE NUMBER (C)
****

1,010 ASSOCIATIONS & ORGANIZATIONS : EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

FILE NUMBER	DESCRIPTION
**********	**********
1,010 00187 10/76 (C D E)	NO- OR LOW TUITION: A LOST CAUSE, LOMBARDI, JOHN, ERIC TOPICAL PAPER NUMBER 58
1,010 00188 9/76 (C D E)	FACULTY CHARACTERISTICS, THE HUMANITIES IN TWO-YEAR COLLEGES, INCLUDES NUMEROUS RELATED ARTICLES

C - SOURCE NUMBER

D - UNIQUE SEQUENCE NUMBER

E - PUBLICATION DATE

Exhibit 5

5/16/77
18:57

SANTA ANA COLLEGE
CATALOG OF DOCUMENTS

RSCCD
ER0024

DOCUMENT LISTING BY
ALPHABETICAL TITLE

ALPHA
LETTER
****

A

FILE NUMBER	DESCRIPTION
1,164 00102 12/76	ANXIETY LEVEL MODIFICATION BY COGNITIVE STYLE MAICHING, TERRELL, WILLIAM, IN COMMUNITY/JUNIOR-COLLEGE RESEARCH QUARTERLY, VOL.1, NO.1

C
D
E

C - Source number

D - Unique sequence number

E - Publication date

listing allows a person to do a manual document search. The ability to quickly locate a document through a search is a valuable time saver for a researcher.

Another advantage that was not perceived during the planning stage is the ability to provide the administration and staff a periodic listing of current documents in the research library (Exhibit 6). The periodic listing is the same as the full listing but only contains the most recent additions to the library. This is a valuable way to diseminate research information to the administration and staff.

As the years pass and the research library grows in size, the file cabinets and bookshelves are filled. It becomes necessary to destroy dated or useless documents (or send them to the library and let them worry about their disposition) and microfilm valuable documents. The Taxonomic Classification System provides the means to accomplish this. The documents are sorted by publication date and the "older" ones are removed from the files and screened for destruction or microfilming. Microfilmed documents can still be listed in the subject index, source index, and alphabetic listing. An "M" after the title tells the user that the document has been microfilmed.

The last advantage to be discussed (it is definitely not the least important) is how the taxonomic classification can improve the image and reputation of the Institutional Research Office. Staff members expect researchers to be logical and highly organized people. Staff members who have received a periodic list of documents and then visit the IR Office to see the system are impressed. An administrator who watches a researcher fumbling through the files in search of a document will surely be disappointed. But if the researcher can confidently look up the document in a listing of documents and then casually locate it in the files, the image of the research

SANTA ANA COLLEGE
CATALOG OF DOCUMENTS

DOCUMENT LISTING BY
SUBJECT INDEX NUMBER

SUBJECT NUMBER	SUBJECT DESCRIPTION	FILE NUMBER	DOCUMENT DESCRIPTION
020.042	ADMINISTRATION : AVERAGE DAILY ATTENDANCE	5,741 00754 1/78	WSCH AND ADA FOR THE COMPOSITION CENTER, THE MATH LAB, AND THE READING LAB, MEMO AND TABLE FROM BOB DALY TO DONNA [illegible]
020.124	ADMINISTRATION : ENROLLMENT	4,602 00760 1/78	ENROLLMENT BY GRADE LEVEL IN ORANGE COUNTY SCHOOLS 1968-1977
020.126	ADMINISTRATION : ENROLLMENT PROJECTIONS	5,741 00756 1/78	CPEC'S REPORT, NEW COMMUNITY COLLEGES IN ORANGE COUNTY: NEED, LOCATION AND GOVERNANCE, CRITIQUE AND MEMO FROM BOB DALY TO VERN ARMSTRONG
020.130	ADMINISTRATION : ENROLLMENT TRENDS	1,002 00771 2/78	RESEARCH REPORT IN COMMUNITY AND JUNIOR COLLEGE JOURNAL, VOL.48, NO.5, INCLUDES EXPLANATIONS OF ENROLLMENT TRENDS 1975-76
020.238	ADMINISTRATION : PLANNING	5,706 00773 2/78	QUALITATIVE APPROACHES TO COLLEGE AND UNIVERSITY PLANNING, COPE, R., UNIVERSITY OF WASHINGTON

office has increased (this technique is particularly effective if the administrator does not know the title of the document or who wrote it).

IV. Disadvantages

The disadvantages of the system can be grouped under two main categories, the demand for additional resources and need for specialized knowledge to develop and maintain the system. Each of these disadvantages were encountered during the planning phase and operational phase of the system.

When the system was first initiated, it was necessary to devote hours to planning the system, coding all the documents, and writing the necessary computer program. At SAC, this first phase was complete in approximately six months. It is estimated that 20% of the research office staff's time was spent on this project during these six months. This time included experimenting with coding documents, actually coding documents, writing a computer program, and attempting to document the system.

With the system in operation, less than two hours per week are utilized in coding new documents. This is less than expected and very acceptable. What was not anticipated was the subjectivity of the subject index coding and a problem with no margin for error in coding.

Several subjective decisions have to be made when subject coding the documents. First, the coder has to decide which is the correct subject index to use. For example, should a survey of graduates be coded as graduate surveys, follow-up studies, occupational follow-up studies, etc. And, which are the appropriate cross-reference indexes. Each of the decisions requires the coder to be exceptionally familiar with the college specifically and education in general.

The other problem mentioned above was that there is no margin for error in coding the documents. If one digit in the subject or source number is

mis-recorded, the document will not appear under its proper heading in the subject and/or source listing. Fortunately, this mis-recording has not been a serious problem. If it becomes so, it will probably be necessary to develop a system of checking the coding.

V. Future Plans

The major enhancement of the system planned during the next two years will be the development of "on-line" file maintenance and "on-line" search of documents. With on-line maintenance, the awkward process of coding the documents, preparing keypunching forms, keypunching, and maintaining a card file will be replaced with a one step system. The coding will be entered directly into the file via a terminal. This will ease the process of adding and deleting documents.

The other improvement will be the ability to do on-line searches of the research library. This can be accomplished by subject or source indexes. Until the on-line search capability is available, the current hard copy listing of documents will be maintained.

UNIVERSITY OF CALIF.
LOS ANGELES

MAY 19 1978

CLEARINGHOUSE FOR
JUNIOR COLLEGES